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SANTA BARBARA • SANTA CRUZ

DEPARTMENT OF CHEMISTRY

BERKELEY, CALIFORNIA 94720

September 5,1973

The Robert A. Welch Foundation
2010 Bank of the Southwest Building
Houston, Texas 77002

Dear Sirs:

I should like to nominate Professor Carl Djerassi of Stanford University for "The Robert A. Welch Award in Chemistry." This award is to foster and encourage basic chemical research, and to recognize in a substantial manner, the value of chemical research with respect to the betterment of mankind as set out in the Will of Robert Alonzo Welch.

Professor Djerassi has made major contributions to organic and medicinal chemistry, both in the academic and industrial areas. In addition, he has been a leader in many worldwide programs which have led to the utilization of chemistry for the betterment of mankind. The enclosed bibliography gives a complete list of his publications and I should only like to call attention to a few areas of chemical research drawn from this list.

In the late 1940's while employed by the Ciba Company, he was the co-inventor of Pyribenzamin, one of the first two antihistamines introduced into medicine. This discovery stimulated an entirely new area of medicinal chemistry which is still actively pursued today because of its importance to mankind.

During the 1950's and 1960's, his research at the Syntex Corporation in the field of steroids led to the development of Snyalar, one of the most effective and widely used topical corterosteroids. His most important discovery, however, was the synthesis of 19-nor-17α-ethynyltestosterone ("Norethindrone"), the first oral contraceptive preparation. This latter discovery had effects far beyond the scientific community and has brought about world-wide concern, social as well as political, with regard to population control. In the field of medicinal chemistry, no other chemist has had such an effect on the field.

During this same period, Professor Djerassi was also guiding an active academic research program. His contributions to the fields of steroids and related natural products have brought him world-wide recognition. I shall not delineate all the specific contributions but I should like to call special attention to his structural chemistry studies which led to the elucidation of the structure of materials like Iresin and Cafesterol, compounds which had a great impact upon the development of biogenetic concepts.

In addition to all the foregoing contributions, there is no doubt that if you sought worldwide opinion his role in the development of the fields of optical rotatory dispersion and mass spectrometry as related to organic chemistry would be known by all. These tools have, in his hands, been developed into standard techniques used by all researchers in structural organic chemistry. These tools have enabled workers to elucidate structures of complex molecules in a time period unthought of in the early 1950's.

In recent years his chemical insight has brought about yet two other developments. It was his recognition of the applicability of the "spin resonance" technique to analytical chemical problems that led him to play a key role in formation and development of the Syva Corporation, a joint venture company of Syntex Corporation and Varian Associates. Perhaps the most visible result of this organization is their key role in the rapid analysis of drug levels in humans, a problem of importance to mankind as it tries to control the drug culture. No sooner had Professor Djerassi led this project on its way to success than he appreciated the importance of insect hormones and attractants in the control of insect populations. The creation of the Zoecon Corporation stemmed from these interests and although a midget among giants, this company, under his direction, has made important contributions to the control of mosquitos in the California central valley.

The Robert A. Welch Award calls special attention to the recognition of the value of chemical research in aspect to the betterment of mankind and clearly the foregoing description of the contributions are known to all the chemical community. However, I would like to call to your attention other activities of Professor Djerassi which may not be so widely recognized.

During the early 1950's while living in Mexico, Djerassi helped establish the Institute of Chemistry of the University of Mexico and after he left Mexico to teach at Wayne State University retained a postdoctoral program at the Institute. This utilization of foreign postdoctoral fellows in lesser developed countries was found to be extremely successful for the establishment of on-going scientific programs. In the 1960's, under support of the Rockefeller Foundation, he initiated a similar program with Brazil, a program which has now been adopted by the National Academy of Sciences. In the late 1960's, he proposed the establishment of a research center in Kenya which would specialize in the study of new methods of insect control. As a result of his dymanic leadership, a research institute sponsored by a number of science academies has been started and in less than 5 years there are now over 30 postdoctoral scientists there with 12-15 foreign part-time scientific directors. Finally, in 1971, he brought about the founding of a Center for the Pygmy-Chimpanzee which will devote its major emphasis to primate and reproductive biology.

In recent years, Professor Djerassi has become interested in the technical aspects of birth control and in the list of reprints you will find two papers in Science related to this problem. These papers have had considerable impact and have called attention to the present day relationship of chemical birth control and world population.

Throughout his entire career, chemistry has served as the basic tool which has led to his involvement in problems of the peoples of the world. He has applied his chemical knowledge in a sound scientific fashion and in an important humantarian nature. I know of no chemist who better fits the concepts held by Robert A. Welch, a person who was interested in the ultimate meaning of chemistry. Clearly, Professor Djerassi has made important chemical contributions which have been significant in affecting for the better the lives of much of mankind.

Sincerely yours,

William G. Dauben

William G. Dauben
Professor of Chemistry

WGD/ae

P.S. Seconding letters for this nomination will be sent by Professor Gilbert Stork, Columbia University; Professor Harrison Brown, National Academy of Sciences; and Professor Joshua Lederberg, Stanford University.